

U.S. Department of the Interior U.S. Geological Survey

Prepared in cooperation with the
City of Hattiesburg, City of Petal, Forrest County,
Mississippi Department of Homeland Security, Mississippi Emergency Management Agency,
and the Emergency Management District

Scientific Investigations Map 3300 Sheet 5 of 13

Pamphlet accompanies map and the Emergency Management District **EXPLANATION** Flood-inundation area Study area boundary Direction of surfacewater flow USGS streamgage and National Weather Service forecast site and identifier USGS streamgage and identifier City of Hatties burg Wastewater T<mark>reatment</mark> 0.5 MILE Projection: Transverse Mercator UNCERTAINTIES AND LIMITATIONS FOR USE OF FLOOD-INUNDATION MAPS North American Datum of 1983 (NAD 83) Orthography from National Agriculture Imagery Program, 2010 Although the flood-inundation maps represent the boundaries of inundated areas with a distinct line, some uncertainty is 0.5 KILOMETER associated with these maps. The flood boundaries shown were estimated based on water stages (water-surface elevations) and streamflows at selected USGS streamgages. Water-surface elevations along the stream reaches were estimated by NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) steady-state hydraulic modeling, assuming unobstructed flow, and by using streamflows and hydrologic conditions Publishing support provided by: Any use of trade, product, or firm names is anticipated at the USGS streamgage(s). The hydraulic model reflects the land-cover characteristics and any bridge, dam, Raleigh Publishing Service Center for descriptive purposes only and does not levee, or other hydraulic structures existing as of December 2011. Unique meteorological factors (timing and distribution of Manuscript approved for publication May 21, 2014 imply endorsement by the U.S. Government. precipitation) may cause actual streamflows along the modeled reach to vary from those assumed during a flood, which may For more information concerning This and other USGS information products are available at: lead to deviations in the water-surface elevations and inundation boundaries shown. Additional areas may be flooded due to DISCLAIMER this publication, contact: http://store.usgs.gov/ unanticipated conditions such as changes in the streambed elevation or roughness, backwater into major tributaries along a Inundated areas shown should U.S. Geological Survey, Box 25286 Director, Mississippi Water Science Center main stem river, or backwater from localized debris or ice jams. The accuracy of the floodwater extent portrayed on these not be used for navigation, U.S. Geological Survey Denver Federal Center, Denver, CO 80225 maps will vary with the accuracy of the digital elevation model used to simulate the land surface. Additional uncertainties and Prepared in collaboration with the regulatory, permitting, or other 308 Airport Road South To learn about the USGS and its information products visit limitations pertinent to this study are described in the document accompanying this set of flood-inundation map sheets. legal purposes. The USGS Jackson, MS 39208-6649 National Weather Service http://www.usgs.gov/or 1-888-ASK-USGS provides these maps "as-is" If this series of flood-inundation maps will be used in conjunction with National Weather Service (NWS) river forecasts, the (601) 933-2900 http://water.weather.gov/ahps/ for a quick reference, user should be aware of additional uncertainties that may be inherent or factored into NWS forecast procedures. The NWS pcpn\_and\_river\_forecasting.pdf Or visit the Mississippi Water Science Center emergency planning tool but uses forecast models to estimate the quantity and timing of water flowing through selected stream reaches in the United Storm, J.B., 2014, Storm, J.B., 2014, An expanded model— Web site at: http://ms.water.usgs.gov/ assumes no legal liability or States. These forecast models (1) estimate the amount of runoff generated by precipitation and snowmelt, (2) simulate the

Flood-Inundation Map for Hattiesburg, Mississippi, Corresponding to a Gage Height of 26.0 Feet and an Elevation of 144.18 Feet (NAVD 88) at U.S. Geological Survey Streamgage Leaf River at Hattiesburg, Mississippi (02473000)

responsibility resulting from

the use of this information.

movement of floodwater as it proceeds downstream, and (3) predict the flow and stage (water-surface elevation) for the

(every 6 hours and 3 to 5 days out in many locations). For more information on AHPS forecasts, please see:

http://water.weather.gov/ahps/pcpn\_and\_river\_forecasting.pdf.

stream at a given location (Advanced Hydrologic Prediction Service [AHPS] forecast point) throughout the forecast period

Flood-inundation maps for the Leaf River at Hattiesburg,

Mississippi, 2013: U.S. Geological Survey Scientific

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